



## Complete Summary

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### TITLE

Neonatal infections: percentage of babies of birth weight less than 1000 grams admitted to the neonatal intensive care unit (NICU) during the time period under study who have a significant blood infection occurring more than 48 hours after birth at any time during their whole admission.

### SOURCE(S)

Australian Council on Healthcare Standards (ACHS). ACHS clinical indicator users' manual 2009. ULTIMO NSW: Australian Council on Healthcare Standards (ACHS); 2009 Jan. 853 p.

## Measure Domain

### PRIMARY MEASURE DOMAIN

Outcome

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the percentage of babies of birth weight less than 1000 grams admitted to the neonatal intensive care unit (NICU) during the time period under study who have a significant blood infection occurring more than 48 hours after birth at any time during their whole admission.

### RATIONALE

Early onset infections are usually acquired from the mother during the birth process. A proportion of these infections are preventable through adherence to appropriate standards of maternal care. Late onset infections within Neonatal Intensive Care may also be prevented through adherence to appropriate standards of care, particularly with management of intravascular lines. The risk of

early and late onset infections is strongly correlated with birth weight and gestational age.

## **PRIMARY CLINICAL COMPONENT**

Neonatal infections (blood); low birth weight (less than 1000 grams)

## **DENOMINATOR DESCRIPTION**

Total number of babies of birth weight less than 1000 grams who survive greater than or equal to 48 hours admitted to the neonatal intensive care unit (NICU), during the 6 month time period (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

## **NUMERATOR DESCRIPTION**

Total number of babies of birth weight less than 1000 grams admitted to the neonatal intensive care unit (NICU) during the time period under study who have a significant blood infection occurring more than 48 hours after birth at any time during their whole admission (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

## **Evidence Supporting the Measure**

### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

## **Evidence Supporting Need for the Measure**

### **NEED FOR THE MEASURE**

Use of this measure to improve performance

### **EVIDENCE SUPPORTING NEED FOR THE MEASURE**

Australian Council on Healthcare Standards (ACHS). Australasian clinical indicator report 2001-2007. Determining the potential to improve quality of care: 9th edition. ULTIMO NSW: Australian Council on Healthcare Standards (ACHS); 2008. 611 p.

## **State of Use of the Measure**

### **STATE OF USE**

Current routine use

### **CURRENT USE**

Internal quality improvement

### Application of Measure in its Current Use

#### **CARE SETTING**

Hospitals

#### **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Physicians

#### **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Single Health Care Delivery Organizations

#### **TARGET POPULATION AGE**

Neonates (greater than or equal to 48 hours of birth)

#### **TARGET POPULATION GENDER**

Either male or female

#### **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

### Characteristics of the Primary Clinical Component

#### **INCIDENCE/PREVALENCE**

Unspecified

#### **ASSOCIATION WITH VULNERABLE POPULATIONS**

Unspecified

#### **BURDEN OF ILLNESS**

Unspecified

#### **UTILIZATION**

Unspecified

#### **COSTS**

Unspecified

## Institute of Medicine National Healthcare Quality Report Categories

### IOM CARE NEED

Getting Better  
Staying Healthy

### IOM DOMAIN

Effectiveness  
Safety

## Data Collection for the Measure

### CASE FINDING

Users of care only

### DESCRIPTION OF CASE FINDING

Babies of birth weight less than 1000 grams who survive greater than or equal to 48 hours admitted to the neonatal intensive care unit (NICU), during the 6 month time period

### DENOMINATOR SAMPLING FRAME

Patients associated with provider

### DENOMINATOR INCLUSIONS/EXCLUSIONS

#### Inclusions

Total number of babies of birth weight\* less than 1000 grams who survive greater than or equal to 48 hours, admitted to the neonatal intensive care unit (NICU)\*\*, during the 6 month time period

\*Refer to the original measure documentation for International Classification of Diseases, Tenth Revision, Australian Modification (ICD-10-AM) codes.

\*\*Intensive care: Level 3 neonatal ICUs only; note that Level 3 nurseries should include in both numerator and denominator, neonates admitted or transferred to their Level 2 step down areas where this facility is managed within the same hospital.

#### Exclusions

Unspecified

### RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are equally eligible to appear in the numerator

## DENOMINATOR (INDEX) EVENT

Clinical Condition  
Institutionalization

## DENOMINATOR TIME WINDOW

Time window brackets index event

## NUMERATOR INCLUSIONS/EXCLUSIONS

### Inclusions

Total number of babies of birth weight less than 1000 grams admitted to the neonatal intensive care unit (NICU) during the time period under study who have a significant blood infection\* occurring more than 48 hours after birth at any time during their whole admission

**\*Significant late blood stream infection definition:** both of these criteria are to be satisfied (see also the flow chart in the original measure documentation):

- Isolation of an organism(s) from blood culture, one or more sets, excluding mixed coagulase negative staph (confirmed by ID\*\*), aerobic coryneforms or propionibacteria **or** repeat isolate of the same organism from blood during the previous 14 days.
- Clinical intent\*\*\* to treat the organism is present.

Refer to the original measure documentation for International Classification of Diseases, Tenth Revision, Australian Modification (ICD-10-AM) codes.

**\*\*It is implied that the laboratory should distinguish strains of coagulase negative Staphylococcus by means of either antibiogram or speciation, rather than just by morphological criteria, as pure cultures of some species such as Staphylococcus *epidermidis* may appear mixed on primary subculture.**

**\*\*\*Clinical intent definition:** After consideration of clinical and laboratory evidence, a decision is made to give the patient antibiotics with therapeutic intent against this organism.

### Exclusions

Unspecified

## MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

## NUMERATOR TIME WINDOW

Institutionalization

## DATA SOURCE

Administrative data  
Medical record

#### **LEVEL OF DETERMINATION OF QUALITY**

Not Individual Case

#### **OUTCOME TYPE**

Adverse Outcome

#### **PRE-EXISTING INSTRUMENT USED**

Unspecified

### **Computation of the Measure**

#### **SCORING**

Rate

#### **INTERPRETATION OF SCORE**

Better quality is associated with a lower score

#### **ALLOWANCE FOR PATIENT FACTORS**

Unspecified

#### **STANDARD OF COMPARISON**

External comparison at a point in time  
External comparison of time trends  
Internal time comparison

### **Evaluation of Measure Properties**

#### **EXTENT OF MEASURE TESTING**

Unspecified

### **Identifying Information**

#### **ORIGINAL TITLE**

Indicator area 4: neonatal infections CI 4.3.

#### **MEASURE COLLECTION**

**MEASURE SET NAME**

[Infection Control Indicators](#)

**DEVELOPER**

Australian Council on Healthcare Standards

**FUNDING SOURCE(S)**

Funding is direct Australian Council on Healthcare Standards (ACHS) funding sourced through our membership. ACHS does not receive external funding from the government or other sources.

**COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE**

Our terms of reference dictate the composition of the working parties that develop our indicators and include the following:

- Two Clinicians -- nominated by the relevant specialty college/association/society, one nominated to be the chair of the working party
- Private Hospital Representative -- nominated by the Australian Private Hospital Association
- Consumer Representative -- nominated by the Consumer Health Forum of Australia
- Coding Representative -- nominated by the National Centre for Clinical classification on Health
- Quality Health New Zealand, nominated by QHNZ (if applicable)
- Epidemiological/Clinical Research Representative, Director of Health Services Research Group, University of Newcastle
- Australian Council on Healthcare Standards (ACHS) Representatives -- Clinical Director, Coordinator, Administrative Assistant
- Other Expert Stakeholders, as required

**FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST**

None

**ADAPTATION**

Measure was not adapted from another source.

**RELEASE DATE**

2002 Jan

**REVISION DATE**

2009 Jan

## **MEASURE STATUS**

This is the current release of the measure.

This measure updates a previous version: Australian Council on Healthcare Standards (ACHS). ACHS clinical indicator users' manual 2008. ULTIMO NSW: Australian Council on Healthcare Standards (ACHS); 2007 Dec. 776 p.

## **SOURCE(S)**

Australian Council on Healthcare Standards (ACHS). ACHS clinical indicator users' manual 2009. ULTIMO NSW: Australian Council on Healthcare Standards (ACHS); 2009 Jan. 853 p.

## **MEASURE AVAILABILITY**

The individual measure, "Indicator Area 4: Neonatal Infections CI 4.3," is published in "ACHS Clinical Indicator Users' Manual 2009."

For more information contact, the Australian Council on Healthcare Standards (ACHS), 5 Macarthur Street, ULTIMO NSW 2007; Phone: (02) 9281 9955; Fax: (02) 9211 9633; E-mail: [pos@achs.org.au](mailto:pos@achs.org.au); Web site: [www.achs.org.au](http://www.achs.org.au).

## **COMPANION DOCUMENTS**

The following is available:

- Australian Council on Healthcare Standards (ACHS). Australasian clinical indicator report 2001-2007. Determining the potential to improve quality of care: 9th edition. ULTIMO NSW: Australian Council on Healthcare Standards (ACHS); 2008. 611 p. This document is available in Portable Document Format (PDF) from the [Australian Council on Healthcare Standards \(ACHS\) Web site](http://www.achs.org.au).

## **NQMC STATUS**

This NQMC summary was completed by ECRI Institute on August 13, 2008. This NQMC summary was updated by ECRI Institute on October 9, 2009.

## **COPYRIGHT STATEMENT**

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